

PCT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

FRAIN, Timothy, John
Nokia Mobile Phones
St. Georges Court
St. Georges Court
Camberley
Surrey GU15 3QZ
ROYAUME-UNI

Date of mailing (day/month/year) 11 November 1997 (11.11.97)	
Applicant's or agent's file reference PAT 97005* PCT	IMPORTANT NOTIFICATION
International application No. PCT/EP97/00910	International filing date (day/month/year) 24 February 1997 (24.02.97)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address NOKIA MOBILE PHONES LIMITED P.O. Box 86 FIN-24101 Salo FINLAND	State of Nationality FI	State of Residence FI
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address NOKIA MOBILE PHONES LIMITED Keilalahdentie 4 FIN-02150 Espoo FINLAND	State of Nationality FI	State of Residence FI
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer S. De Michiel
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

28 Rec'd PCT/EP 10 24 AUG 1998

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

**NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES**

(PCT Rule 47.1(c), first sentence)

To:

FRAIN, Timothy, John
Nokia Mobile Phones
St. Georges Court
St. Georges Court
Camberley
Surrey GU15 3QZ
ROYAUME-UNI

Date of mailing (day/month/year)

04 September 1997 (04.09.97)

Applicant's or agent's file reference

PAT 97005* PCT

IMPORTANT NOTICE

International application No.

PCT/EP97/00910

International filing date (day/month/year)

24 February 1997 (24.02.97)

Priority date (day/month/year)

28 February 1996 (28.02.96)

Applicant

NOKIA MOBILE PHONES LIMITED et al

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,BR,CA,CN,DE,EP,IL,JP,KP,KR,NO,PL,RO,SK,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AL,AM,AP,AT,AZ,BA,BB,BG,BY,CH,CU,CZ,DK,EA,EE,ES,FI,GB,GE,HU,IS,KE,KG,KZ,LC,LK,LR,
LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NZ,OA,PT,RU,SD,SE,SG,SI,TJ,TM,TR,TT,UA,UG,UZ,VN

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on
04 September 1997 (04.09.97) under No. WO 97/32424

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 18 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

J. Zahra

Telephone No. (41-22) 338.83.38

Form PCT/IB/308 (July 1998)

1865752

PCT

REQUEST

23 Rev. 10/97 24 AUG 1998

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference (if desired) (12 characters maximum) PAT 97005* PCT

Box No. I TITLE OF INVENTION

RADIOTELEPHONE

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

NOKIA MOBILE PHONES LIMITED
PO BOX 86
SF 24101
SALO
FINLAND

☐ This person is also inventor.

Telephone No.

358 24 3061

Facsimile No.

358 2430 64 544

Teleprinter No.

State (i.e. country) of nationality: FINLAND

State (i.e. country) of residence: FINLAND

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

FUHRMANN, Thomas
Buldergeist 48
D-48249 Dülmen/Buldern
Germany

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality: GERMANY

State (i.e. country) of residence: GERMANY

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

FRAIN, Timothy John
POTTER, Julian Mark
SLINGSBY, Philip Roy
HAWS, Helen Louise
of NOKIA MOBILE PHONES, ST GEORGES COURT
ST GEORGES ROAD, CAMBERLEY, SURREY
GU15 3QZ UNITED KINGDOM

Telephone No.

01276 686116

Facsimile No.

01276 677720

Teleprinter No.

☐ Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Continuation of Box No. III FURTHER APPLICANTS AND/OR (FURTHER) INVENTORS

If none of the following sub-boxes is used, this sheet is not to be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

WILKE, Annett
Castroper Str. 205
D-44791 Bochum
Germany

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

GERMANY

State (i.e. country) of residence:

GERMANY

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

UMBACH, Dirk
Rheinstr 48
D-45525 Hattingen
Germany

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

GERMANY

State (i.e. country) of residence:

GERMANY

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

BARNETT, Ricky William
17 Kendals Close
Radlett
Hertfordshire
WD7 8NQ
United Kingdom

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

GREAT BRITAIN

State (i.e. country) of residence:

GREAT BRITAIN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

JOHNSON, Terence
9 Marlborough Close
Fleet
Hampshire
GU13 9HY
United Kingdom

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

GREAT BRITAIN

State (i.e. country) of residence:

GREAT BRITAIN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box



Further applicants and/or (further) inventors are indicated on another continuation sheet.

Continuation of Box No. III FURTHER APPLICANTS AND/OR (FURTHER) INVENTORS

If none of the following sub-boxes is used, this sheet is not to be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

MASON, Mark Robert
5 The Sonnets
Gadebridge
Hemel Hempstead
Hertfordshire
HP1 3RS
United Kingdom

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:
GREAT BRITAIN

State (i.e. country) of residence:
GREAT BRITAIN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

SAMUELS, Bruce
26 Sandown Way
Greenham
Newbury
Berkshire
RG14 7SV United Kingdom

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:
GREAT BRITAIN

State (i.e. country) of residence:
GREAT BRITAIN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

HORNE, Tony
56 Woodlands Road
Baughurst
Tadley
Hampshire
RG26 5NP
United Kingdom

This person is:

- ☐ applicant only
☒ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:
GREAT BRITAIN

State (i.e. country) of residence:
GREAT BRITAIN

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

This person is:

- ☐ applicant only
☐ applicant and inventor
☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality:

State (i.e. country) of residence:

This person is applicant for the purposes of:

- ☐ all designated States ☐ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☒ AP ARIPO Patent: KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- | | |
|--|--|
| <input checked="" type="checkbox"/> AL Albania | <input checked="" type="checkbox"/> LU Luxembourg |
| <input checked="" type="checkbox"/> AM Armenia | <input checked="" type="checkbox"/> LV Latvia |
| <input checked="" type="checkbox"/> AT Austria | <input checked="" type="checkbox"/> MD Republic of Moldova |
| <input checked="" type="checkbox"/> AU Australia | <input checked="" type="checkbox"/> MG Madagascar |
| <input checked="" type="checkbox"/> AZ Azerbaijan | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina | |
| <input checked="" type="checkbox"/> BB Barbados | <input checked="" type="checkbox"/> MN Mongolia |
| <input checked="" type="checkbox"/> BG Bulgaria | <input checked="" type="checkbox"/> MW Malawi |
| <input checked="" type="checkbox"/> BR Brazil | <input checked="" type="checkbox"/> MX Mexico |
| <input checked="" type="checkbox"/> BY Belarus | <input checked="" type="checkbox"/> NO Norway |
| <input checked="" type="checkbox"/> CA Canada | <input checked="" type="checkbox"/> NZ New Zealand |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> PL Poland |
| <input checked="" type="checkbox"/> CN China | <input checked="" type="checkbox"/> PT Portugal |
| <input checked="" type="checkbox"/> CU Cuba | <input checked="" type="checkbox"/> RO Romania |
| <input checked="" type="checkbox"/> CZ Czech Republic AND UTILITY MODEL | <input checked="" type="checkbox"/> RU Russian Federation |
| <input checked="" type="checkbox"/> DE Germany AND UTILITY MODEL | <input checked="" type="checkbox"/> SD Sudan |
| <input checked="" type="checkbox"/> DK Denmark AND UTILITY MODEL | <input checked="" type="checkbox"/> SE Sweden |
| <input checked="" type="checkbox"/> EE Estonia | <input checked="" type="checkbox"/> SG Singapore |
| <input checked="" type="checkbox"/> ES Spain | <input checked="" type="checkbox"/> SI Slovenia |
| <input checked="" type="checkbox"/> FI Finland AND UTILITY MODEL | <input checked="" type="checkbox"/> SK Slovakia AND UTILITY MODEL |
| <input checked="" type="checkbox"/> GB United Kingdom | <input checked="" type="checkbox"/> TJ Tajikistan |
| <input checked="" type="checkbox"/> GE Georgia | <input checked="" type="checkbox"/> TM Turkmenistan |
| <input checked="" type="checkbox"/> HU Hungary | <input checked="" type="checkbox"/> TR Turkey |
| <input checked="" type="checkbox"/> IL Israel | <input checked="" type="checkbox"/> TT Trinidad and Tobago |
| <input checked="" type="checkbox"/> IS Iceland | <input checked="" type="checkbox"/> UA Ukraine |
| <input checked="" type="checkbox"/> JP Japan | <input checked="" type="checkbox"/> UG Uganda |
| <input checked="" type="checkbox"/> KE Kenya | <input checked="" type="checkbox"/> US United States of America |
| <input checked="" type="checkbox"/> KG Kyrgyzstan | |
| <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea | <input checked="" type="checkbox"/> UZ Uzbekistan |
| | <input checked="" type="checkbox"/> VN Viet Nam |
| <input checked="" type="checkbox"/> KR Republic of Korea | |
| <input checked="" type="checkbox"/> KZ Kazakstan | |
| <input checked="" type="checkbox"/> LC Saint Lucia | |
| <input checked="" type="checkbox"/> LK Sri Lanka | |
| <input checked="" type="checkbox"/> LR Liberia | |
| <input checked="" type="checkbox"/> LS Lesotho | |
| <input checked="" type="checkbox"/> LT Lithuania | |

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

In addition to the designations made above, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except the designation(s) of _____

The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIMFurther priority claims are indicated in the Supplemental Box ☐

The priority of the following earlier application(s) is hereby claimed:

Country (in which, or for which, the application was filed)	Filing Date (day/month/year)	Application No.	Office of filing (only for regional or international application)
item (1) EP	28 February 1996	96102988.1	European Patent Office - Munich
item (2)			
item (3)			

Mark the following check-box if the certified copy of the earlier application is to be issued by the Office which for the purposes of the present international application is the receiving Office (a fee may be required):

☐ The receiving Office is hereby requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s) : _____
Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (If two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / _____

Earlier search Fill in where a search (international, international-type or other) by the International Searching Authority has already been carried out or requested and the Authority is now requested to base the international search, to the extent possible, on the results of that earlier search. Identify such search or request either by reference to the relevant application (or the translation thereof) or by reference to the search request:

Country (or regional Office):

Date (day/month/year):

Number:

Box No. VIII CHECK LIST

This international application contains the following number of sheets:

1. request : 5 sheets
 2. description : 10 sheets
 3. claims : 2 sheets
 4. abstract : 1 sheets
 5. drawings : 4 sheets

Total : 22 sheets

This international application is accompanied by the item(s) marked below:

1. ☐ separate signed power of attorney
 2. ☐ copy of general power of attorney
 3. ☐ statement explaining lack of signature
 4. ☒ priority document(s) identified in Box No. VI as item(s):
 5. ☒ fee calculation sheet
 6. ☐ separate indications concerning deposited microorganisms
 7. ☐ nucleotide and/or amino acid sequence listing (diskette)
 8. ☐ other (specify):

Figure No. 1 of the drawings (if any) should accompany the abstract when it is published.**Box No. IX SIGNATURE OF APPLICANT OR AGENT**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).



P. R. SLINGSBY
Agent for the Applicant

For receiving Office use only

1. Date of actual receipt of the purported international application:	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority specified by the applicant: ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

PCT**FEE CALCULATION SHEET****Annex to the Request**

For receiving Office use only

International application No.

Date stamp of the receiving Office

Applicant's or agent's
file reference

PAT 97005* PCT

Applicant

NOKIA MOBILE PHONES LIMITED

CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE 200 T

2. SEARCH FEE 2400 S

International search to be carried out by _____

(If two or more International Searching Authorities are competent in relation to the international application, indicate the name of the Authority which is chosen to carry out the international search.)

3. INTERNATIONAL FEE

Basic Fee

The international application contains < 30 sheets.

first 30 sheets 955 b₁_____ x _____ = _____ b₂

remaining sheets additional amount

Add amounts entered at b₁ and b₂ and enter total at B 955 B**Designation Fees**

The international application contains _____ designations.

11 x 232 = 2552 D

number of designation fees payable (maximum 11) amount of designation fee

Add amounts entered at B and D and enter total at I 3507 I

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.)

4. FEE FOR PRIORITY DOCUMENT ----- P

5. TOTAL FEES PAYABLE

Add amounts entered at T, S, I and P, and enter total in the TOTAL box DEM 6107

TOTAL

☒ The designation fees are not paid at this time.**MODE OF PAYMENT**☒ authorization to charge
deposit account (see below)☐ bank draft☐ coupons☐ cheque☐ cash☐ other (specify):☐ postal money order☐ revenue stamps**DEPOSIT ACCOUNT AUTHORIZATION** (this mode of payment may not be available at all receiving Offices)The RO/ _____ ☒ is hereby authorized to charge the total fees indicated above to my deposit account.☒ is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.☐ is hereby authorized to charge the fee for preparation and transmittal of the priority document to the International Bureau of WIPO to my deposit account.

28050155

21.2.1997

Deposit Account Number

Date (day/month/year)

Signature

PATENT COOPERATION TREATY

23 Rec 107710

24 AUG 1998

From the

INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Frain, Timothy John
NOKIA Mobile Phones
St. Georges Court
St. Georges Road
Camberley, Surrey GU15 3QZ
GRANDE BRETAGNE

☐ Computer
☐ File Record
☒ ☒ Diary
 1 JUN 1998
☒ Renewal Record
☐ Citations
☐ Inv Award

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

29.05.98

Applicant's or agent's file reference

PAT97005*PCT

IMPORTANT NOTIFICATION

International application No.
PCT/EP97/00910

International filing date (day/month/year)
24/02/1997

Priority date (day/month/year)
28/02/1996

Applicant

NOKIA MOBILE PHONES LIMITED

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

European Patent Office
D-80298 Munich
Tel. (+49-89) 2399-0, Tx: 523656 epmu d
Fax: (+49-89) 2399-4465

Authorized officer

Finnie, A

Tel. (+49-89) 2399-8251



PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PAT97005*PCT	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">FOR FURTHER ACTION</div> <div style="font-size: small;">see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</div> </div>	
International application No. PCT/EP 97/ 00910	International filing date(<i>day/month/year</i>) 24/02/1997	(Earliest) Priority Date (<i>day/month/year</i>) 28/02/1996
Applicant NOKIA MOBILE PHONES LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (see Box I).

2. ☐ Unity of invention is lacking (see Box II).

3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing

☐ filed with the international application.

☐ furnished by the applicant separately from the international application,

☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.

☐ Transcribed by this Authority

4. With regard to the title, ☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is:

Figure No. 1 ☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

28 Rec'd PCPTO 24 AUG 1998

✓	Search Record	PS
✓	Classification	
✓	Indexing	
✓	Publication	
✓	Translation	
✓	Other	
JUN 1997		
PCT		

From the INTERNATIONAL SEARCHING AUTHORITY

To:
 NOKIA Mobile Phones
 St. Georges Court
 Attn. Frain, Timothy John
 St. Georges Road
 Camberley, Surrey GU15 3QZ
 UNITED KINGDOM

NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT
 OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing (day/month/year)	18. 06. 97
Applicant's or agent's file reference PAT97005*PCT	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/EP 97/00910	International filing date (day/month/year) 24/02/1997
Applicant NOKIA MOBILE PHONES LIMITED et al.	

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland
 Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicants's request to forward the texts of both the protest and the decision thereon to the designated Offices.


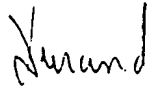
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+ 31-70) 340-3016	Authorized officer Odette Durand-Fleith 
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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

REC'D 03 JUN 1998

WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PAT97005*PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (PCT/IPEA/416)	
International application No. PCT/EP97/00910	International filing date (day/month/year) 24/02/1997	Priority date (day/month/year) 28/02/1996
International Patent Classification (IPC) or national classification and IPC H04M1/02		
Applicant NOKIA MOBILE PHONES LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 7 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 24/09/1997	Date of completion of this report 29. 05. 98
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Rabe, M Telephone No. (+49-89) 2399-8801 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP97/00910

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-14 as originally filed

Drawings, sheets:

1/4-4/4 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
☒ claims Nos. 14.

because:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP97/00910

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 14 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 2-13
	No: Claims 1
Inventive step (IS)	Yes: Claims
	No: Claims 1-13
Industrial applicability (IA)	Yes: Claims 1-13
	No: Claims

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP97/00910

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

A. Remarks made in respect of paragraph III:

Independent claim 14 merely contains a reference to the description and drawings.

Said claim therefore does not meet the requirement following from Article 6 PCT taken in combination with Rule 6 (3) (b) PCT that any independent claim must contain all the technical features essential to the invention.

Furthermore, according to Rule 6.2 (a) PCT, references to the description and drawings are allowable only where the reference is absolutely necessary (cf. PCT Guidelines, PCT/GL/3, Chapter III, 4.10). Such is, however, not the case here.

B. Citations and explanations in respect of paragraph V:

1. The document **WO-A-9 317 513** (see in particular abstract; page 2, lines 22 to 31; page 4, lines 18 to 25; page 14, line 14 to page 15, line 26; Figure 8) discloses, according to **all** the features of **claim 1**, an electronic radiotelephone (see page 14, lines 14 to 16; Figure 8) comprising a first housing (see page 2, lines 22 to 23; page 14, lines 24 to 29; "606" in Figure 8); a second housing (see "506" in Figure 8) releasably attachable to the first housing to meet with the first housing around the periphery of the radiotelephone (see page 2, lines 22 to 23 and 27 to 31; page 4, lines 18 to 22; page 14, lines 18 to 23; page 15, lines 12 to 16); and retaining means (see "636" in Figure 8) comprising a cover, for holding the electronic components (see in particular "706" in Figure 8) of the radiotelephone to the first housing when the second housing is released from attachment with the first housing (see in particular page 2, lines 23 to 27; page 15, lines 3 to 10 and 17 to 26).

The subject-matter of claim 1 therefore is **not new**, Article 33 (2) PCT.

It should furthermore be noted that even if novelty of claim 1 could be argued, based on minor differences between the features of claim 1 and those disclosed in **WO-A-9 317 513**, the subject-matter of said claim would **not involve an inventive step**, Article 33 (3) PCT, having regard to the disclosure of **WO-A-9 317 513**

and the normal knowledge of a person skilled in the art of radiotelephones and related technologies (see e.g. also the disclosure of **US-A-4 291 202**, in particular column 4, lines 3 to 34; Figure 9).

2. Furthermore, **dependent claims 2 to 13** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step for the reason that the subject-matter of said claims **either is in principle** directly derivable from the disclosure of **WO-A-9 317 513** (for claim 2: see "506" in Figure 8; for claim 3: see "636" and "706" in Figure 8; for claim 4: see page 14, lines 30 to 31 and "620" in Figure 8; for claim 6: see page 15, lines 3 to 10 as well as "636" and "706" in Figure 8; for claims 10 to 13: see "618" and "620" in Figure 8), **or** represents minor design details which are based on the general knowledge of the person skilled in the field of radiotelephones and related technologies.

Dependent claims 2 to 13 therefore do **not** meet the requirements of Article 33 (3) PCT.

C. Remarks made in respect of paragraph VII:

1. To meet the requirements of Rule 5.1 (a) (ii) PCT, the document **WO-A-9 317 513**, which represents the nearest available prior art, should have been identified in the opening part of the description and the relevant background art disclosed therein should have been briefly discussed.
2. To meet the requirements of Rule 6.3 (b) PCT, any independent claim should have been correctly cast in the **two-part form**, with those features which in combination are part of the nearest prior art described in WO-A-9 317 513 being placed in the preamble.
3. **Reference signs** in parentheses should have been inserted in all the claims to increase their intelligibility, Rule 6.2 (b) PCT. This applies both to the preamble and to the characterizing portion.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP97/00910

D. Remarks made in respect of paragraph VIII:

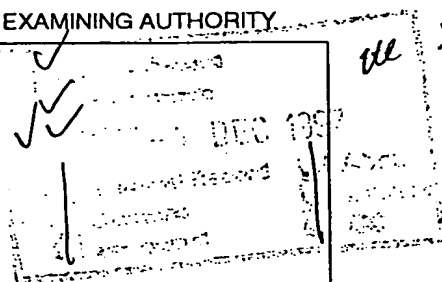
1. The description does not include, apart from a short reference in the brief description of the drawings on page 4, a description of Figures 3 and 4. This shortcoming should have been overcome taking into consideration the requirements of Article 34 (2) (b) PCT.
2. Any reference to "the invention" or to an "embodiment" thereof should have been avoided in parts of the description not falling within the scope of the subject-matter of the claims (Article 6 PCT in combination with Rule 5.1 (a) (iii) PCT; see also PCT Guidelines, PCT/GL/3, Chapter III, 4.3).
3. The general statement in lines 6 to 9 on page 10 of the description is not clear, and when used to interpret the claims renders them also unclear, contrary to Article 6 PCT. The statement therefore should have been deleted (see also PCT Guidelines PCT/GL/3, Chapter III, 4.3a).

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Frain, Timothy John
NOKIA Mobile Phones
St. Georges Court
St. Georges Road
Camberley, Surrey GU15 3QZ
GRANDE BRETAGNE



PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year) 0 2. 12. 97	
Applicant's or agent's file reference PAT97005*PCT	REPLY DUE within 3 month(s) from the above date of mailing
International application no. PCT/EP97/00910	International filing date (day/month/year) 24/02/1997
Priority date (day/month/year) 28/02/1996	
International Patent Classification (IPC) or both national classification and IPC H04M1/02	
Applicant NOKIA MOBILE PHONES LIMITED et al.	

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
2. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☒ Certain defects in the international application
 - VIII ☒ Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and / or arguments, see Rule 66.4bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: **28/06/1998**

DUE DATE: 2 MAR 1998

TARGET CLIENT: ()

TARGET RESPONSE: 19 FEB 98

Name and mailing address of the international preliminary examining authority

European Patent Office
D-80298 Munich
Tel. (+49-89) 2399-0. Tx: 523656 epmu d
Fax: (+49-89) 2399-4465

Authorized officer / Examiner
Rabe, M

Formalities officer (incl. extension of time limits)
Finnie, A
Telephone No. (+49-89) 2399-8251



I. Basis of the opinion

1. This opinion has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".)*:

Description, pages:

1-10 as originally filed

Claims, No.:

1-14 as originally filed

Drawings, sheets:

1/4-4/4 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

II. Priority

1. ☐ This opinion has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed.
 - ☐ translation of the earlier application whose priority has been claimed.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid. :

Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 14,

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 14 are so unclear that no meaningful opinion could be formed (*specify*):
see Separate Sheet, paragraph A
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

IV. Lack of unity of invention

1. In response to the invitation (Form PCT/IPEA/405) to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. This Authority found that the requirement of unity of invention is not complied with for the following reasons and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees:

3. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this opinion:

- ☐ all parts.
- ☐ the parts relating to claims Nos. .

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1
Inventive step (IS)	Claims	1 to 13
Industrial applicability (IA)	Claims	

2. Citations and explanations

see Separate Sheet, paragraph B

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

2. Non-written disclosures (Rule 70.9)

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see Separate Sheet, paragraph C

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see Separate Sheet, paragraph D

A. Remarks made in respect of paragraph III :

Independent claim 14 merely contains a reference to the description and drawings.

Said claim therefore does not meet the requirement following from Article 6 PCT taken in combination with Rule 6 (3) (b) PCT that any independent claim **must contain all the technical features essential to the invention**.

Furthermore, according to Rule 6.2 (a) PCT, references to the description and drawings are allowable only where the reference is absolutely necessary (cf. PCT Guidelines, PCT/GL/3, Chapter III, 4.10). Such is, however, **not** the case here.

B. Citations and explanations in respect of paragraph V:

1. The document **WO-A-9 317 513** (see in particular abstract; page 2, lines 22 to 31; page 4, lines 18 to 25; page 14, line 14 to page 15, line 26; Figure 8) discloses, according to **all** the features of **claim 1**, an electronic radiotelephone (see page 14, lines 14 to 16; Figure 8) comprising a first housing (see page 2, lines 22 to 23; page 14, lines 24 to 29; "606" in Figure 8); a second housing (see "506" in Figure 8) releasably attachable to the first housing to meet with the first housing around the periphery of the radiotelephone (see page 2, lines 22 to 23 and 27 to 31; page 4, lines 18 to 22; page 14, lines 18 to 23; page 15, lines 12 to 16); and retaining means (see "636" in Figure 8) comprising a cover, for holding the electronic components (see in particular "706" in Figure 8) of the radiotelephone to the first housing when the second housing is released from attachment with the first housing (see in particular page 2, lines 23 to 27; page 15, lines 3 to 10 and 17 to 26).

The subject-matter of claim 1 therefore is **not new**, Article 33 (2) PCT.

It should furthermore be noted that even if novelty of claim 1 could be argued, based on minor differences between the features of claim 1 and those disclosed in

WO-A-9 317 513, the subject-matter of said claim would **not** involve an **inventive step**, Article 33 (3) PCT, having regard to the disclosure of **WO-A-9 317 513** and the normal knowledge of a person skilled in the art of radiotelephones and related technologies (see e.g. also the disclosure of **US-A-4 291 202**, in particular column 4, lines 3 to 34; Figure 9).

2. Furthermore, **dependent claims 2 to 13** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step for the reason that the subject-matter of said claims **either is in principle** directly derivable from the disclosure of **WO-A-9 317 513** (for claim 2: see "506" in Figure 8; for claim 3: see "636" and "706" in Figure 8; for claim 4: see page 14, lines 30 to 31 and "620" in Figure 8; for claim 6: see page 15, lines 3 to 10 as well as "636" and "706" in Figure 8; for claims 10 to 13: see "618" and "620" in Figure 8), **or** represents minor design details which are based on the general knowledge of the person skilled in the field of radiotelephones and related technologies.

Dependent claims 2 to 13 therefore **do not** meet the requirements of Article 33 (3) PCT.

C. Remarks made in respect of paragraph VII:

1. To meet the requirements of Rule 5.1 (a) (ii) PCT, the document **WO-A-9 317 513**, which represents the nearest available prior art, should be identified in the opening part of the description and the relevant background art disclosed therein should be briefly discussed.
2. To meet the requirements of Rule 6.3 (b) PCT, any independent claim should be correctly cast in the **two-part form**, with those features which in combination are part of the nearest prior art described in **WO-A-9 317 513** being placed in the preamble.

3. The opening part of the description should be brought **into conformity with the wording** of any new or amended independent claim, Rule 5.1 (a) (iii) PCT.
4. **Reference signs** in parentheses should be inserted in all the claims to increase their intelligibility, Rule 6.2 (b) PCT. This applies both to the preamble and to the characterizing portion.
5. The attention of the Applicant is drawn to the fact that the application may **not be amended in such a way** that it contains subject-matter which **extends beyond** the content of the application as filed, Article 34 (2) (b) PCT.

In his letter of reply, the Applicant should **indicate the parts of the originally filed application serving as a basis for subject-matter newly introduced into the claims.**

6. The Applicant is requested to file amendments by way of replacement pages in accordance with Rule 66.8 PCT. In particular, fair copies of the amendments should be filed in triplicate.

D. Remarks made in respect of paragraph VIII:

1. The description does not include, apart from a short reference in the brief description of the drawings on page 4, a description of **Figures 3 and 4**. This shortcoming should be overcome taking into consideration the requirements of Article 34 (2) (b) PCT.
2. Any reference to "the invention" or to an "embodiment" thereof should be avoided in parts of the description not falling within the scope of the subject-matter of the claims (Article 6 PCT in combination with Rule 5.1 (a) (iii) PCT; see also PCT Guidelines, PCT/GL/3, Chapter III, 4.3).
3. The general statement in lines 6 to 9 on page 10 of the description is not clear, and when used to interpret the claims renders them also unclear, contrary to

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/EP97/00910

Article 6 PCT. The statement therefore should be deleted (see also PCT Guidelines, PCT/GL/3, Chapter III, 4.3a).



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RADIOTELEPHONE

This invention relates to a radiotelephone.

It has become desirable to be easily able to replace housing parts of radiotelephones. For example, customers may want to replace a broken or scratched housing for repair purposes, or to change the appearance of a radiotelephone by replacing its housing with another of a different appearance. Also, there may be a need for radiotelephones to be supplied to dealers without being fully housed, so that the dealers can fit distinctive housings of their own before the radiotelephones are sold. Normally it is the user interface housing of the phone that is replaced in this way.

Normally, when housing parts of a phone, especially user interface housing parts, are removed the internal components of the phone become loose and/or exposed and there is a significant risk of them being damaged. This makes it risky for unskilled people to replace the phone's housing parts, or for phones to be shipped in a partially housed state.

According to the present invention from one aspect there is provided: an electronic radiotelephone comprising: a first housing; a second housing releasably attachable to the first housing to meet with the first housing around the periphery of the radiotelephone; and retaining means comprising a cover, for holding the electronic components of the radiotelephone to the first housing when the second housing is released from attachment with the first housing.

The cover may extend over all or some of the electronic components of the phone. If the cover does not extend over all the components then the retaining means may comprise further articles such as a circuit board or another cover. The cover preferably retains user interface components such as a microphone, a

speaker, a display or a keymat. The cover preferably has means to allow communication between the retained user interface components and a user - for example a transparent or translucent portion, a deformable portion or a hole or aperture. The cover may hold one or more seals behind it, preferably for sealing around user interface components and, most preferably, associated apertures.

The cover is preferably attachable to the first housing, either directly or via other components of the retaining means. The cover is most preferably releasably attachable - for example by spring clips.

The first and second housings preferably provide front and rear outer casings for the radiotelephone. The housings preferably meet around substantially all of the perimeter of the radiotelephone, although there may suitably be regions where they do not meet - for example to provide access to the interior of the phone (e.g. for connectors).

At least one user interface component may be held captive between the second housing and the retaining means when the second housing is attached to the first housing. That said component is preferably a component which is visible, most preferably over a substantial region of the surface of the radiotelephone, when the radiotelephone is assembled. The component is preferably a keymat.

The cover preferably holds a keymat and/or a member that provides at least one user-actuable key to the first housing.

According to the present invention from a second aspect there is provided an electronic device having a housing which has a housing wall with openings for control elements and/or display elements, characterised by attachment means for detachably connecting to the housing an external wall element which at least partially covers the housing wall, the external wall element having openings which are aligned with the openings in the housing wall.

When the housing wall provided with openings is covered by the external wall element, the openings provided in the housing wall and in the external wall element are preferably aligned with one another so that for example the push-button keys which may project through the openings can continue to be used even after the external wall element is fitted on to the housing wall and/or so that display elements which may be inserted into the openings can be read. This preferably also applies to microphones or loudspeakers which may be inserted into the openings - for example in the case of cordless telephones.

By means of either aspect of the invention, the electronics provided in the device may suitably be protected against access by the customer when the external appearance of the housing is modified. Then, if one external wall element is to be replaced by another in order to give the electronic device a new design there is a reduced risk of the electronics present in the housing being damaged when the external wall elements are interchanged, or of the user being subjected to danger by the electronics present inside the housing. The external wall elements could even be interchanged when an electronic device is operating.

According to an advantageous refinement of the invention, the external wall element can engage, at least partially, over further housing walls of the housing so that the design of the housing can be modified to an even greater extent or adapted to the wishes of the user to an even greater degree.

The profile of the external wall element can preferably follow the profile of the housing walls of the housing, for instance if emphasis is being placed not so much on the modification of the shape of the housing but on changing the colour or the type of material of the housing. Alternatively, the external wall elements can have different shapes (which can also deviate from one another to a greater degree) provided it is ensured that after the respective external wall elements have been connected to the housing respective openings in the fitted-

on external wall element and in the housing wall in question are aligned with one another.

The external wall element can preferably be of, for example, shell-shaped design so that it can be fitted for example with one edge on to a base which projects outwards beyond the side walls of the housing.

Any desired attachment means can be used to attach the external wall element to the housing of the electronic device, but attachment means with press-on/catch closure can preferably be used. They preferably ensure a secure connection between the external wall element and the housing and, moreover, can suitably be easily used without a special tool being required for them.

The present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

figure 1 shows a radiotelephone of a first embodiment with its external wall element removed;

figure 2 shows the radiotelephone of figure 1 with the external wall element fitted;

figure 3 shows a view of the interior of housing 14 of the radiotelephone of figure 1;

figure 4 shows a cross-section through part of the housing of figure 3; and

figure 5 shows an exploded view of a second embodiment of the invention.

The invention is explained below with reference to two embodiments of mobile phone.

Figure 1 shows a mobile phone having a housing 1 with which a plate-shaped base element 2 and a shell-shaped housing element 3 are associated. The plate-

shaped based element 2 and the shell-shaped housing element 3 are connected to one another using screws (not illustrated) which project upward through openings 4 in the shell-shaped housing element 3 and are screwed into sockets (not illustrated) which are fixedly connected to the inside of the plate-shaped base element 2. Inside the housing 1 there is a carrier plate or circuit board for electronic components etc., attached in a suitable way.

The shell-shaped housing element 3 has a housing wall 5 which is disposed essentially parallel with the plate-shaped base element 2 and located at a distance therefrom and is integral with side walls 6 which are supported with their free or lower edge on the plate-shaped base element 2. In this arrangement, the plate-shaped base element 2 projects outwards beyond the side walls 6 by constant distance in its edge region so that a profile with an identical contour is obtained.

In the housing wall 5 there is a plurality of through-openings 7 through which components inside the housing 1 partially project. The through-openings 7 can be provided for, for example, push-button keys 8, a display device 9 or a loudspeaker device/microphone device 10. A corresponding through-opening may also be present in the rear side wall 6' for an aerial.

On each of the side walls 6 extending in the longitudinal direction of the housing 1 there are two attachment means 11, at a distance from one another, which are designed as push fit/catch closures. They are located in each case near the front and rear ends of the telephone. The attachment means 11 have a catch projection 12 which is biased outwards in a sprung fashion and can be pressed inwards into the housing 1 against the outwardly acting spring force by means of an externally accessible activation element 13. The attachment means serve to attach to the housing 1 an external wall element 14 which is fitted over the shell-shaped housing element 3 and is also of shell-shaped design.

The shell-shaped external wall element 14 which is illustrated in Figure 1 has approximately the same contour as the shell-shaped cover 3 but is designed in such a way that it can receive the shell-shaped housing element 3 in it. If the external wall element 14, which is designed as a thin-walled shell, is fitted on to the shell-shaped housing element 3, the shell-shaped external wall element 14 is supported with the free or downwardly pointing edge of its side walls on that part of the plate-shaped base element 2 which projects outwards beyond the shell-shaped housing element 3. Here, the wall thickness of the side walls of the shell-shaped external wall element 14 corresponds to the distance by which the edge of the plate-shaped base element 2 projects outwards beyond the side walls 6, 6' of the shell-shaped housing element 3. As a result, no step remains in the connection area between the shell-shaped external wall element 14 and the plate-shaped base element 2. The height of the side walls of the shell-shaped external wall element 14 can be selected such that the main face of the external wall element 14 comes to rest at a short distance from the housing wall 5 and as a result does not exert any pressure on the latter.

Openings 7', which are aligned with the openings 7 in the housing wall 5 of the shell-shaped housing element 3, are provided in the main face of the external wall element 14. Therefore, it is possible to continue to operate the telephone even when the external wall element 14 is fitted on to the shell-shaped housing element 3. At the same time, the push-button keys 8 can be of such a height that they also project outwards beyond the external wall element 14. Openings which are present in the external wall element 14 for the display device 9 and the loudspeaker device/microphone device 10 can be covered, for example by means of a transparent element 15 or a grille 16.

Figure 2 shows the cordless telephone or mobile phone in a state in which the shell-shaped external wall element 14 is fitted on to the shell-shaped housing element 3 and is detachably connected to the housing 1. On the internal faces of the long side walls of the external wall element 14 there are notches for the

catch projections 12 of the attachment means 11 so that the catch projections 12 engage in the notches as a result of the outwardly pressing spring force, and thus hold the external wall element on the housing 1. In this state, the activation elements 13 are also pushed outwards but only to such an extent that they do not project beyond the side edge of the plate-shaped base element 2 or of the external wall element 14. The activation elements 13 can extend here in a groove 17 in the upper face of the plate-shaped base element 2. If the activation elements 13 are pressed inwards, that is to say inwards along the groove 17, for example using a pointed object, they move the catch projections 12 correspondingly inwards along with them so that the said catch projections 12 disengage from the notches on the inside of the side walls 6 of the external wall element 14. The external wall element 14 can then be removed from the housing 1.

The external wall element 14 is fitted on to the housing 1 by simply pressing it on. The catch projections 12 then engage automatically in the notches.

Figure 5 shows an exploded view of another embodiment. The mobile phone of figure 5 has two outer housings 18, 19. The housings mate together around the periphery of the phone to enclose almost all of the phone's components.

The lower housing 18 has a rear recess 18a, to accommodate a first circuit board 20, and a front shelf 18b to provide support behind the phone's keypad. The circuit board 20 carries and connects together electronic components, including RF (radio frequency) components shielded within RF shields 21. A two-part connector 22 is provided to allow for push-fit electrical connection between circuit board 20 and a second circuit board 23. Circuit board 23 carries other electronic components, including a buzzer 24 (for generating a telephone ringing tone) and an electrical connector 25 (for allowing external connections to be made to the phone - for example to program the phone or connect an external antenna).

A microphone 26 fits in a recess 25a in the connector block. The microphone is surrounded by a rubber sleeve or an o-ring 27 to hold it securely, by friction, in the recess 25a. The microphone has concentric electrical connection pads on its lower surface to connect to spring fingers on the circuit board 23 underneath it irrespective of the microphone's orientation relative to the circuit board.

Circuit board 23 has a region 28 of exposed printed conductive zones for cooperating with conductive portions of keypad membrane 29 to provide a touch-sensitive keypad. When the membrane is fixed by adhesive to the circuit board flexible domed regions 29a of the membrane can be pressed to the circuit board to act as key switches for sensing pressure from a user. When the phone is fully assembled each domed region falls below one of the keys 24a of keymat 24 so that a user can actuate the key switches.

A translucent plastics frame 32 fits to the rear end of circuit board 23. The frame carries an LCD (liquid crystal display) unit 30 and a reflector 31. The frame defines a recess 32a dimensioned to receive a speaker 33. The speaker has sprung rear connectors which, when the phone is assembled and the speaker is pressed towards the circuit board connect to corresponding connection pads on the circuit board 23.

To assemble the phone, circuit board 23 is screwed by means of screws 40 to the rear housing 18, holding the circuit board 20 in place behind it in the recess 18a. Microphone 26 is inserted in recess 25a and held in place by the friction of its o-ring 27 against the walls of the recess; at the same time the connections to the microphone are made by the spring fingers. Membrane 29 is fixed by adhesive to the circuit board 23. The frame 32 is offered up to the rear end of circuit board 23 and display unit 30 is soldered to the circuit board 23 to make the connections to the display. Speaker 33 is then set in the corresponding

recess 32a, with its spring contacts against the speaker contact pads on circuit board 23.

Next gasket 34 is placed over the frame/display assembly to seal around the edges of the speaker 33 and display device 30. The gasket is formed of flexible rubber with sealing walls that surround holes 34a, 34b for the speaker and display device. The gasket also includes a projecting key portion 34c whose upper end, when the phone has been fully assembled, projects through hole 19a in the upper housing 19. The key portion is flexible and has a conductive coating of carbon ink on its lower end which can make contact with corresponding tracks on the circuit board 23 when the upper end of the key portion is pressed by a user.

A retaining frame 35 is then pushed into place over the gasket to hold the gasket, the speaker 33, the LCD unit 30 and the frame 32 to the circuit board 23. The frame 35 has a generally flat top surface 36 and side walls 37. The frame is stamped from aluminium sheet around 80µm thick. The top surface 36 of the frame has a hole 35a for the display, a hole 35b for the key portion 34a, a hole 35c for a locating pin 32b on the plastics frame 32 and a grille 35d of holes for the speaker 33. When the frame 35 is pushed into place it squeezes the speaker and the LCD unit between the circuit board 23 and the gasket 34. The side walls of the cover are forced out slightly and then spring back as clips 38, bent from the side walls 37, engage the lower surface of the circuit board 23. The frame 35 thus clips into place and by bending the walls outward again the cover can be removed if needed. The clips 38 then hold the frame to the circuit board 23 and by means of the frame the gasket, the display unit and the speaker are held to the circuit board 23. For security a screw 39 is then inserted through holes in the upper projection, the plastics frame 32, and the circuit board 23 and then into the lower housing 18.

The antenna 40 is screwed in place in the lower housing 18.

At this stage in the assembly process only two components of the phone are loose from the assembly mounted to the rear housing 18; the keymat 24 and the front 19 with its display window 41 fixed in place by adhesive. To complete the assembly process the keymat is sat on the membrane 29, the front housing is mated to the rear housing and the two are screwed together with screws 43.

The present invention may include any novel feature or combination of features disclosed herein either explicitly or implicitly or any generalisation thereof irrespective of whether or not it relates to the presently claimed invention or mitigates any or all of the problems addressed. In view of the foregoing description it will be evident to a person skilled in the art that various modifications may be made within the scope of the invention. For example, it will be appreciated that the invention may be applied to a wide range of electronic devices such as calculators and personal organizers as well as radiotelephones.

CLAIMS

1. An electronic radiotelephone comprising:
 - a first housing;
 - a second housing releasably attachable to the first housing to meet with the first housing around the periphery of the radiotelephone; and
 - retaining means comprising a cover, for holding the electronic components of the radiotelephone to the first housing when the second housing is released from attachment with the first housing.
2. An electronic radiotelephone as claimed in claim 1, wherein the second housing is a user interface housing of the radiotelephone.
3. An electronic radiotelephone as claimed in claim 1 or 2, wherein the retaining means comprises a circuit board of the radiotelephone.
4. An electronic radiotelephone as claimed in claim 3, wherein at least one key sensor is provided on an outer surface of the circuit board.
5. An electronic radiotelephone as claimed in claim 3 or 4, wherein the cover is arranged to hold components of the radiotelephone between it and the said circuit board.
6. An electronic radiotelephone as claimed in any of claims 3 to 5, wherein the cover is releasably engageable with the circuit board
7. An electronic radiotelephone as claimed in any preceding claim, wherein at least one user interface component is retained by the cover.

8. An electronic radiotelephone as claimed in claim 7, wherein the cover includes an aperture overlying at least one user interface component retained by the cover.
9. An electronic radiotelephone as claimed in any preceding claim, wherein a sealing member is retained by the cover.
10. An electronic radiotelephone as claimed in any preceding claim, comprising at least one key unit for user-actuation of a key sensor, and wherein when the second housing is released from attachment with the first housing the key unit is free to move with respect to the first housing.
11. An electronic radiotelephone as claimed in any preceding claim, comprising at least one key unit for user-actuation of a key sensor, and wherein when the second housing is attached to the first housing the key unit is sandwiched between the second housing and the key sensor.
12. An electronic radiotelephone as claimed in claim 10 or 11, wherein the key unit is a key mat.
13. An electronic radiotelephone as claimed in claim 11 or 12, wherein the key sensor comprises a membrane switch.
14. An electronic radiotelephone substantially as herein described with reference to the accompanying drawings.

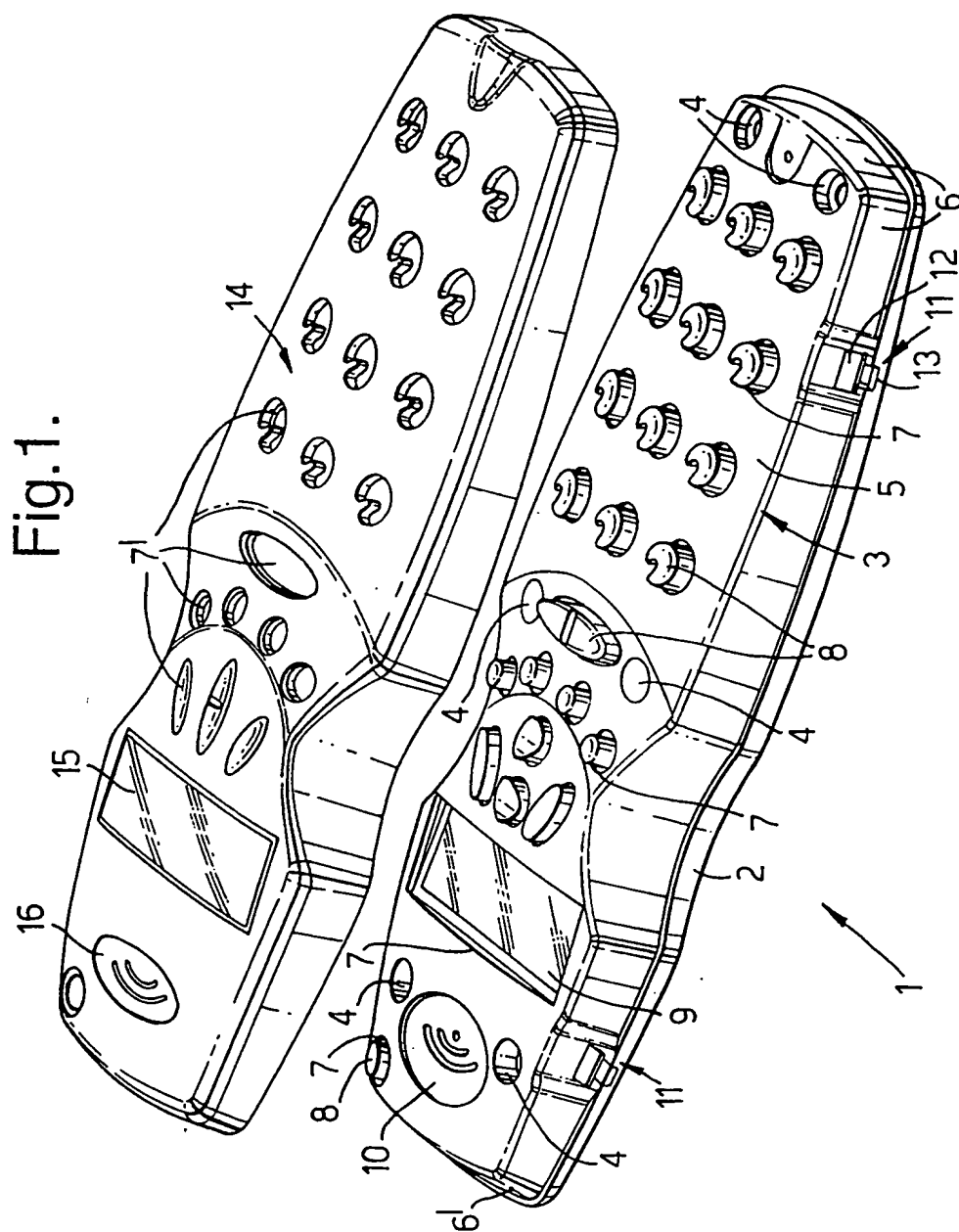
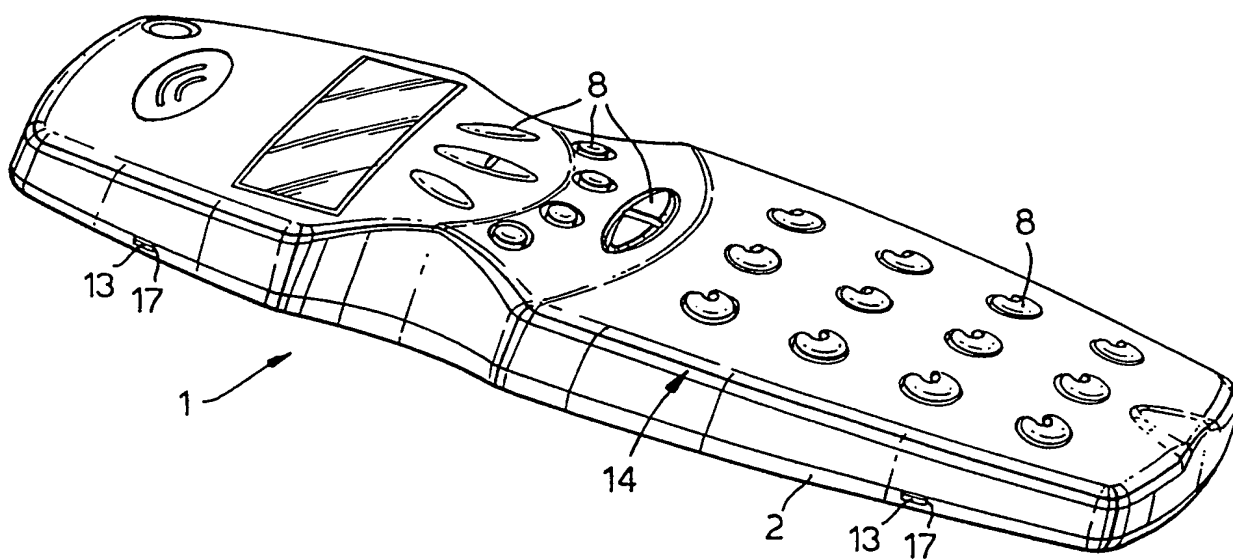


Fig.2.



3/4

Fig.3.

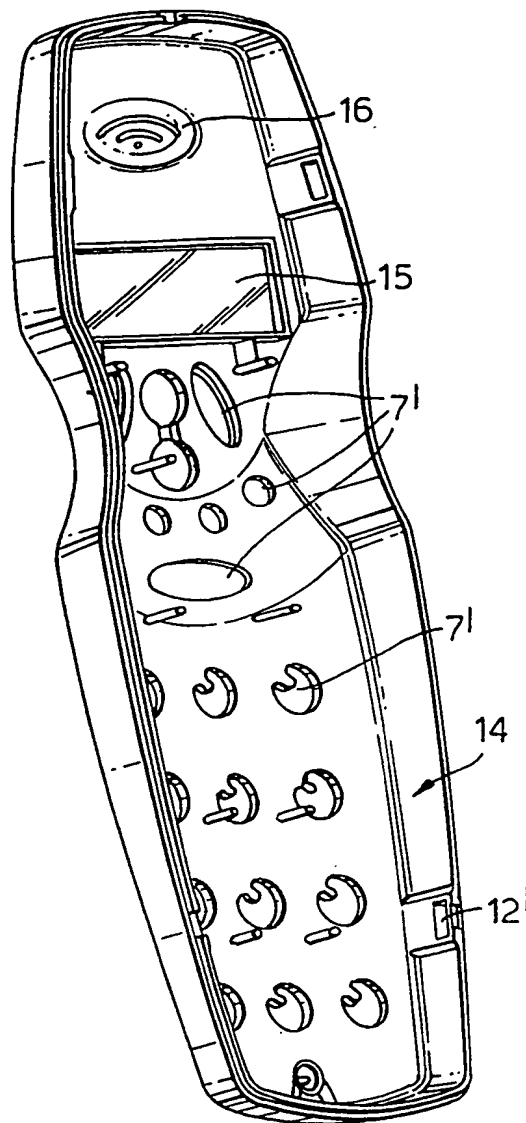
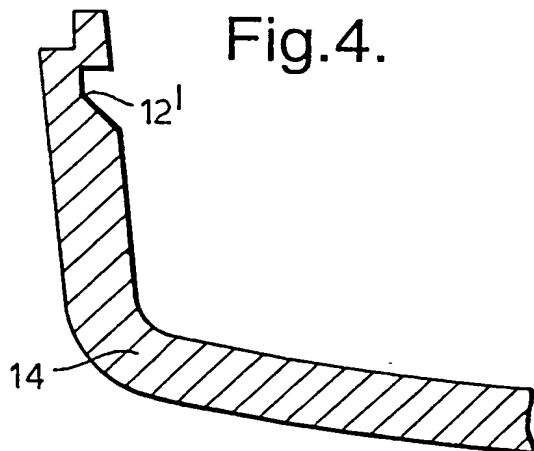
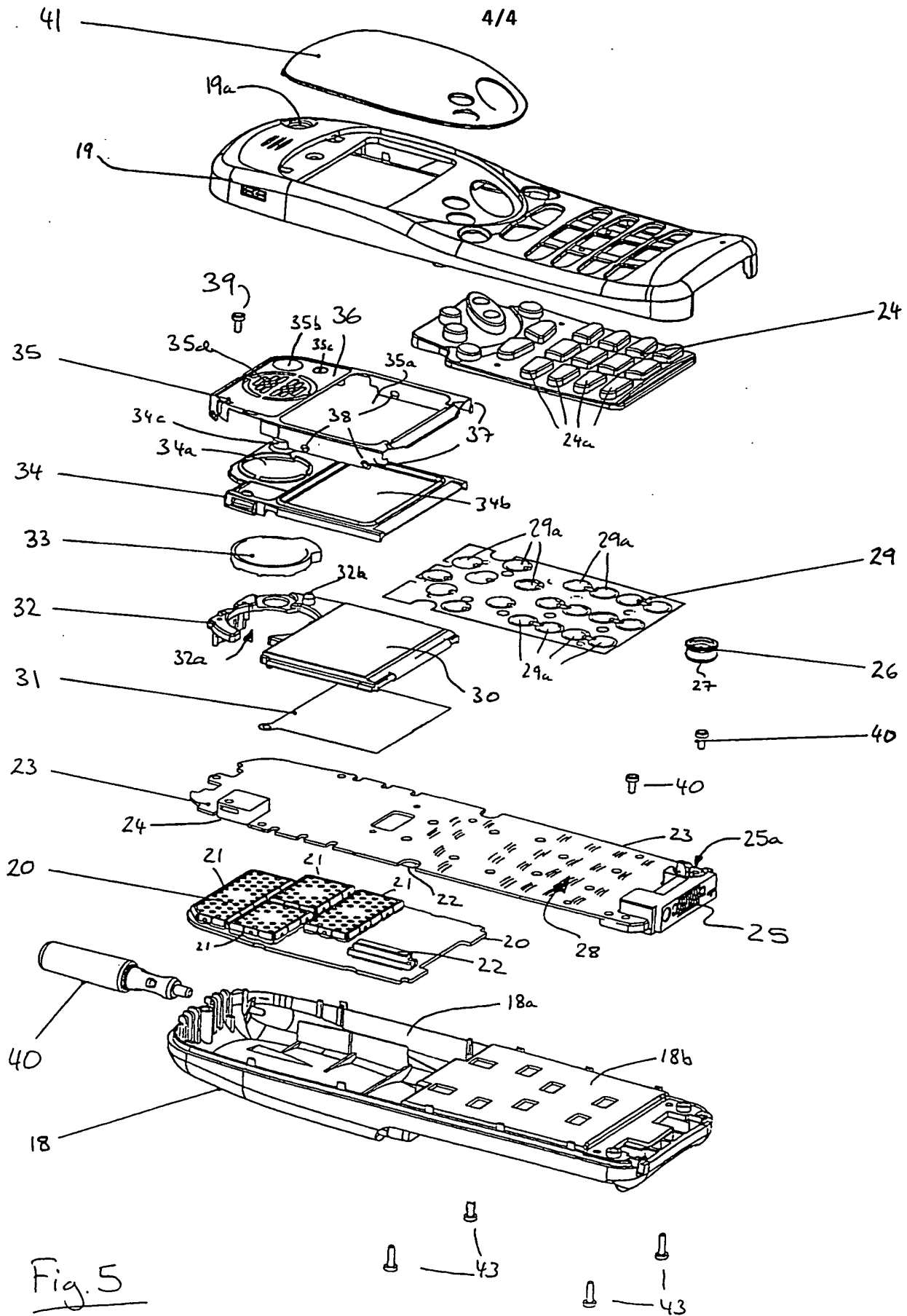


Fig.4.





INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 97/00910

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04M1/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04M H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 93 17513 A (MOTOROLA INC) 2 September 1993 see page 2, line 22 - line 31 see page 4, line 18 - line 25 see page 7, line 25 - page 16, line 3; figures 1-10 ---	1,3-8
Y	US 4 291 202 A (ADAMS ET AL) 22 September 1981 see column 2, line 18 - column 4, line 34; figures 1-9 ---	1,3-8
A		10-14
A	US 5 357 065 A (MITAMURA ET AL) 18 October 1994 see column 2, line 47 - column 3, line 40; figures 1,2 ---	1,10-13
	--- -/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 97/00910

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 124 785 A (SERETNY ET AL) 7 November 1978 see column 4, line 13 - line 61; figures 1-3 -----</p>	1,3-8

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 97/00910

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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US 4291202 A	22-09-81	CA 1142282 A	01-03-83
US 5357065 A	18-10-94	JP 6029677 A	04-02-94
US 4124785 A	07-11-78	CA 1082828 A CA 1090021 A	29-07-80 18-11-80